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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,334

04/16/2004

Makoto Shonohara

D-1588

7902

7590

06/30/2005

KANESAKA AND TAKEUCHI

1423 Powhatan Street

Alexandria, VA 22314

EXAMINER

TANG, MINH NHUT

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## **NEW CENTRAL FAX NUMBER**

Effective July 15, 2005

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005.

After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

## Office Action Summary

Application No.

10/825,334

Applicant(s)

SHONOHARA, MAKOTO

Examiner

Minh N. Tang

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### *Claim Objections*

3. Claim 1 is objected to because of the following informalities: there is an insufficient antecedent basis for the limitation "the TFT substrate" (lines 4-5); therefore "the TFT substrate" should be -- a TFT substrate --.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Toro-Lira (U.S.P. 5,982,190).

As to claim 1, Toro-Lira discloses, in Fig. 5, a TFT array inspection apparatus for inspecting a TFT array, comprising: irradiating means (71) for irradiating an electron beam (59) on the TFT array including a specific pixel and a specific site (79) on a TFT

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substrate (61) to obtain a secondary electron signal (63), and defect analyzing means (74) for analyzing a defect of at least one of the specific pixel and the specific site (79) based on a change in a waveform (see Fig. 6B) of the secondary electron signal (63) and a driving state of the TFT array.

As to claim 2, Toro-Lira discloses in column 4, lines 45-50, scanning means (scanning) for scanning the electron beam (59) on the TFT substrate (61) to obtain scanning signal, and defect detecting means (74) for detecting defective site the TFT substrate (61) according to the scanning signal, said irradiating means (71) irradiating the electron beam (59) on the defective site to obtain the secondary electron signal (63) so that the defect analyzing means (74) analyzes the defective site based on the change in the waveform of the secondary electron signal (63) and the driving state of the TFT array.

As to claim 3, Toro-Lira discloses in Fig. 7, switching means (62) for switching operations between the scanning means (scanning) and the irradiating means (71) and operations between the defect detecting means (74) and the defect analyzing means (74), said switching means (62) synchronously switching between the scanning means (scanning) and the irradiating means (71) and between the defect detecting means (74) and the defect analyzing means (74).

As to claim 4, Toro-Lira discloses in Fig. 5, said defect detecting means (74) detects the defective site including at least one of a defective pixel (79) and a defective region having the defective pixel on the TFT substrate (61).

As to claim 5, Toro-Lira discloses in Fig. 5, said irradiating means (71) is an electron gun for irradiating the electron beam (59) on the TFT substrate (61) so that secondary electron (63) is discharged from the TFT substrate (61).

As to claim 6, Toro-Lira discloses in Fig. 5, detecting means (66) located above the TFT substrate (61) for detecting the secondary electron (63) discharged from the TFT substrate (61) to obtain the secondary electron signal (63), and signal generating means (74) electrically connected to the TFT substrate (61) for applying an inspection signal (activation signals) to the TFT substrate (61), said defect analyzing means (74) being electrically connected to the detecting means (66) and the signal generating means (74) for analyzing the defective site based the secondary electron signal (63) and the inspection signal (activation signals).

As to claim 7, Toro-Lira discloses in Fig. 5, a stage (not shown) for placing the TFT substrate (61) capable of moving the TFT substrate (61) horizontally.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Takahashi et al.	4,906,922	Voltage Mapping Device Having Fast Time Resolution.
Henley	5,432,461	Method Of Testing Active Matrix Liquid Crystal Display Substrate.
Abel	6,765,203	Pallet Assembly For Substrate Inspection Device And Substrate Inspection Device.

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Toro-Lira et al. 6,873,175 Apparatus And Method For Testing Pixels  
Arranged In An Matrix Array.

**Communication**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh N. Tang whose telephone number is (571) 272-1971. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (571) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
MINH NHUTTANG  
PRIMARY EXAMINER

6/24/05



<b>Notice of References Cited</b>	Application/Control No. 10/825,334	Applicant(s)/Patent Under Reexamination SHONOHARA, MAKOTO	
	Examiner Minh N. Tang	Art Unit 2829	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-4,906,922 A	03-1990	Takahashi et al.	324/753
	B	US-5,432,461 A	07-1995	Henley, Francois J.	324/770
	C	US-5,982,190 A	11-1999	Toro-Lira, Guillermo L.	324/770
	D	US-6,765,203 B1	07-2004	Abel, Alan	250/310
	E	US-6,873,175 B2	03-2005	Toro-Lira et al.	324/770
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.